

Exhibit 1

**EXHIBIT 1:
CURRICULUM VITAE
DAVID H. PERSING, M.D., PH.D.**

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CURRICULUM VITAE
DAVID H. PERSING, M.D., PH.D.

David Harold Persing, M.D., Ph.D.

Date of Birth: June 13, 1955, San Jose, California

Address: 2225 48th Street, S.W., Rochester, MN 55902

Telephone: (507) 284-2876 (Work)
(507) 280-7696 (Home)
E-mail: persing@mayo.edu

Marital Status: Married

Education:

September 1974 - June 1979
California State University, San Jose, California
B.A. in Biochemistry awarded June 1979

October 1980 - May 1988
School of Medicine, University of California, San Francisco

October 1981 - May 1988
Medical Scientist Training Program,
University of California, San Francisco

September 1982 - March 1987
Graduate Program in Biochemistry and Biophysics,
Division of Genetics, University of California,
San Francisco

March 1988
Ph.D. granted, Department of Biochemistry and
Biophysics, University of California, San Francisco

May 1988
M.D. granted, School of Medicine, University of California, San Francisco

July 1988 - June 1990
Resident and Fellow, Department of Laboratory Medicine, Yale School of Medicine

July 1989 - September 1990
Research Fellow, Department of Cell Biology, Yale School of Medicine

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Honors:

Graduation with highest honors,
California State University, San Jose, California, 1979

Departmental Honors in Chemistry, 1979

Finalist, Dean's Prize for Research, School of Medicine, 1981

Graduate Dean's prize for Student Research,
University of California, San Francisco, 1984

Gip A. Hudson Award for the study of liver diseases,
National Student Research Forum, Galveston, Texas, 1985

James McLaughlin Award for the study of infectious diseases,
National Student Research Forum, Galveston, Texas, 1985

University Patent Funds Award, 1986

Young Investigator Award,
Academy of Clinical Laboratory Physicians and Scientists, 1989

Mayo Foundation Scholar, 1990

U. S. Patent Application: "Sensitive and Specific Detection of *B. burgdorferi* by Nucleic Acid Amplification," 1994

U. S. Patent Application: "Specific Detection of Rifampin Resistant *Mycobacterium tuberculosis* by Nucleic Acid Amplification," 1994

U.S. Patent Application: "Method for Detecting *Borrelia burgdorferi* Infection," 1996

College of American Pathologists, Microbiology Resource Committee, 1993-present

ASM Foundation Lectureship, 1995-1997

Associate Editor: *Journal of Clinical Microbiology*, 1996-

Associate Editor: *Molecular Diagnosis*, 1996-

1997 Justus Strom Award , Swedish Medical Society

Dubious Honors:

Consultant to Criminal Attorney Barry Scheck and invited expert witness, O.J. Simpson criminal trial

Editorial Boards:

Journal of Clinical Microbiology (1990-1996)
Diagnostic Microbiology and Infectious Diseases (1994-96)
New England Journal of Medicine (Regular Reviewer)
Gastroenterology (Regular Reviewer)
Journal of Infectious Diseases (Guest Reviewer)

Scientific Advisory Boards:

Vysis, Inc., Naperville, IL (1995-present)
Corixa, Inc., Seattle, WA (1995-present)
BioMerieux, Marcy L'Etoile, France (1996-present)

Licensure and Certification:

Status: Medicine and Surgery License #35080, State of Minnesota
Board Certified Forensic Examiner
Board Eligible, Clinical Pathology

Appointments:

Summer Research Fellowship, University of California,
San Francisco, School of Medicine, 1980

September 1981 to May 1988:

Medical Scientist Training Program, University of California, San Francisco

July 1988 to June 1990:

Resident, Department of Laboratory Medicine, Yale University School of Medicine

July 1990 to September 1990:

Mayo Foundation Scholar, Department of Cell Biology, Yale University School of Medicine

September 1990 to June 1994:

Senior Associate Consultant, Divisions of Clinical Microbiology, Experimental Pathology and Infectious Diseases, Mayo Clinic/Foundation

June 1994 to present:

Consultant, Divisions of Clinical Microbiology, Experimental Pathology and Infectious Diseases, Mayo Clinic/Foundation

January 1991 to June 1995:

Assistant Professor, Department of Laboratory Medicine and Pathology, Mayo Medical School

July 1995 to present:

Associate Professor of Microbiology, Mayo Medical School, Mayo Clinic/Foundation

July 1995 to present:

Associate Professor, Department of Laboratory Medicine and Pathology, Mayo Medical School

September 1991 to present:
Adjunct Assistant Professor, Department of Biology/
Microbiology, University of Wisconsin-La Crosse

1996 to present:
M.D.- Ph.D. Program Council, Mayo Medical School

Societies:

American Association for the Advancement of Science
California Medical Association
American Society for Microbiology
Minnesota Medical Association
American Medical Association
American Society for Tropical Medicine and Hygiene
American College of Rheumatology

Teaching Experience:

Teaching Assistant, Chemistry for Engineers, San Jose State University,
September 1979 to June 1980

Graduate Teaching Assistant, Introductory Biochemistry
UC San Francisco, September 1982 to April 1983

Instructor, Biochemistry National Boards Review Course,
School of Dentistry, UC San Francisco, 1983-1986

Biochemistry Advisor, Health Science Special Services
Summer Program, 1984-1986

Laboratory Instructor, Medical Microbiology Course, Yale School of
Medicine, 1988-1989

Lecturer, Medical Microbiology Course, Yale School of Medicine, 1989

Medical Microbiology Course, Mayo Medical School, 1991-present

Volunteer Services:

Department of Public Health, Huehuetenango, Guatemala,
1977-1978

National Ski Patrol, Alpine Meadows and Homewood, CA, 1978-1981

Dorothy Day House, Rochester, MN, 1992-present

Extracurricular Activities:

Skiing, vintage automobile restoration, brass ensemble (trombone)

Research Experience and Supervisors:**Spring 1979 - Summer 1980****Dr. Robert Fowler, Department of Biology, San Jose State University. Mutational specificity of the base analogue, 2-aminopurine in *Escherichia coli*.****Summer 1980 - Spring 1981****Dr. Phillip Coffino, Department of Microbiology, UC San Francisco. Mechanism of 2-aminopurine mutagenesis in mouse T-lymphosarcoma cells.****Summer 1981 - Fall 1981****Dr. Harold E. Varmus, Department of Microbiology, UC San Francisco. Molecular analysis of mutant src alleles.****Summer 1982 - Winter 1983****Dr. Patrick O'Farrell, Department of Biochemistry, UC San Francisco. Isolation and characterization of DNA clones representing the engrailed locus of *Drosophila melanogaster*.****Spring 1983 to 1988****Drs. Donald Ganem and Harold Varmus (1989 Nobel Laureate) (thesis co-advisors) Identification and characterization of the presurface proteins of hepatitis B virus.****July 1989 to September 1990****Dr. Ari Helenius, Department of Cell Biology, Yale School of Medicine. Papovaviruses: Assembly, Disassembly, and Cellular Interactions.****Current Research Interests:****Laboratory-based, extramurally funded programs**

- 1) Immunological interactions of tick-borne infections
- 2) Determinants of microbial persistence and tissue tropism
- 3) Effects of T cell differentiation on disease expression
- 4) Identification of novel T cell adjuvants from microbial sources

Clinical research

- 1) Association of viral heterogeneity and host immunogenetic determinants in viral disease expression
- 2) Pathogen discovery by broad-range amplification techniques
- 3) Association of infections with cancer and chronic human diseases

Extramural Support:**NIH - Allergy and Infectious Diseases: 1-PO1-AI30548-01-A1 (9/1/91 - 8/31/96)****Lyme Disease: Pathogenesis and Protection (Yale Program Project Grant),****P.I.: S. W. Barthold, D.V.M., Ph.D. Co-investigator: David H. Persing, M.D., Ph.D.; \$295,407 award amount, direct costs****NIH - Allergy and Infectious Diseases: 1-R01-AI32403-01 (9/30/91 - 8/31/97)****Mechanisms of Biological Variation in Lyme Disease,****P.I.: D. H. Persing, M.D., Ph.D.; \$1,006,775 award amount, direct costs, Status: renewal pending**

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NIH - Arthritis Institute 1-R01-AR41497-01 (9/1/91 - 8/31/95)

Molecular Diagnosis and Monitoring of Lyme Disease.

P.I.: D. H. Persing, M.D., Ph.D.; Co-funded with 1-R01-AI32403-01;\$227,359 award amount, direct costs; Status: decided against renewal of AR portion

Centers for Disease Control - U50/CCUS10343- (4/15/94 - 2/1/98)

Genetic Diversity of *B. burgdorferi* in the United States:

P.I.: D. H. Persing, M.D., Ph.D.; \$120,000 total costs per year

Centers for Disease Control - US0/CCU510528 (11/1/97 - 10/31/00)

Recombinant Immunoassays for Detection of *Babesia microti* Infection:

P.I.: David H. Persing, M.D., Ph.D.; \$62,500 per year, direct costs

NIH - Allergy and Infectious Disease: 1-R01-AI45253-01 (9/30/94-9/29/99) Animal Models for Chronic Lyme Disease;

P.I.: Stephen W. Barthold, D.V.M., Ph.D.; Co-investigator: David H. Persing, M.D., Ph.D.

Co-investigator portion: \$683,114 total award amount, direct costs

Chiron Corporation - Molecular Diagnostic Assay Development Award (12/1/92-present):

Co-investigator: David H. Persing, M.D., Ph.D.; **Coinvestigator portion:** \$104,000 per year, direct costs

Corixa Corporation - 4-1-96 to present (indefinite termination) Identification of Microbial Biomolecules with Novel Immunologic Properties:

P.I.: David H. Persing, M.D., Ph.D.; \$50,000 per year, direct costs

NIH - Allergy and Infectious Disease 1-R01-AI41103-0; Investigation of the Natural History of Babesiosis (5/1/97 - 5/31/00); \$124,914 per year, direct costs

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